

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
27 October 2005 (27.10.2005)

PCT

(10) International Publication Number
WO 2005/100297 A1

(51) International Patent Classification⁷: **C07C 69/753**

(21) International Application Number:
PCT/KR2005/001051

(22) International Filing Date: 12 April 2005 (12.04.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10-2004-0025218 13 April 2004 (13.04.2004) KR

(71) Applicants (for all designated States except US): **KOREA RESEARCH INSTITUTE OF CHEMICAL TECHNOLOGY** [KR/KR]; #100, Jang-dong, Yuseong-gu, Daejeon 305-343 (KR). **JEIL PHARM. CO., LTD.** [KR/KR]; #745-5, Banpo-dong, Seocho-gu, Seoul 137-810 (KR). **KOREA RESEARCH INSTITUTE OF BIOSCIENCE AND BIOTECHNOLOGY** [KR/KR]; #52, Oeun-dong, Yuseong-gu, Daejeon 305-333 (KR). **CJ CORP.** [KR/KR]; #500, Namdaemunro 5-ga, Jung-gu, Seoul 100-802 (KR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CHEON, Hyae Gyeong** [KR/KR]; Narae Apt. 109-402, Jeonmin-dong, Yuseong-gu, Daejeon 305-390 (KR). **YOO, Sung-Eun** [KR/KR]; #314-16, Keumam-ri, Janggi-myeong, Kongju-si, Cheungcheongnam-do 314-911 (KR). **KIM, Sung Soo** [KR/KR]; Hanwool Apt. 101-901, Sinsseong-dong, Yuseong-gu, Daejeon 305-707 (KR). **YANG, Sung-Don** [KR/KR]; Daelim Dure Apt. 107-304, Sinsseong-dong, Yuseong-gu, Daejeon 305-345 (KR). **KIM, Kwang-Rok** [KR/KR]; Hanmaeul Apt. 115-206, Songgang-dong, Yuseong-gu, Daejeon 305-756 (KR). **RHEE, Sang Dal** [KR/KR]; Croba Apt. 109-1206, Dunsan-dong, Seo-gu, Daejeon 302-772 (KR). **AHN, Jin Hee** [KR/KR]; Sejong Apt. 109-804, Jeonmin-dong, Yuseong-gu, Daejeon 305-390 (KR). **KANG, Seung Kyu** [KR/KR]; Jindalrae Apt. 103-1401, #312-1, Wolpyung-dong, Seo-gu, Daejeon 302-280 (KR). **JUNG, Won Hoon** [KR/KR]; Bangju Apt. 102-601, Panam-dong, Dong-gu, Daejeon 300-130 (KR). **PARK, Sung Dae** [KR/KR]; Jamwon Family Apt. 1-1006, Jamwon-dong, Seocho-gu, Seoul 137-030 (KR). **KIM, Nam Gee** [KR/KR]; Keumho

Apt. 107-304, #95-1, Garak-dong, Songpa-gu, Seoul 138-160 (KR). **KIM, Sun Mee** [KR/KR]; Woncheon Sungil Apt. 201-505, Maetan-2-dong, Paldal-gu, Suwon-si, Kyungki-do 442-711 (KR). **MO, Kil Woong** [KR/KR]; #161-1, Jangwi-3-dong, Seongbuk-gu, Seoul 136-143 (KR). **LEE, Jae Mok** [KR/KR]; #750-42, Shillim-dong, Kwanak-gu, Seoul 151-010 (KR). **KANG, Hye Jung** [KR/KR]; Hanjin Hyundai Apt. 101-1802, Hwaseo-dong, Jangan-gu, Suwon-si, Kyungki-do 440-150 (KR). **LEE, Koun Ho** [KR/KR]; Joongang Heights 1-802, Seoggwan-1-dong, Seongbuk-gu, Seoul 136-151 (KR). **KIM, Jong Hoon** [KR/KR]; Hangaram Samsung Apt. 210-1302, Bulim-dong, Dongan-gu, Anyang-si, Kyungki-do 431-065 (KR). **LEE, Jeong-Hyung** [KR/KR]; #252-32, Byeon-dong, Seo-gu, Daejeon 302-190 (KR). **KIM, Seung Jun** [KR/KR]; Hanbit Apt. 113-1201, Oeun-dong, Yuseong-gu, Daejeon 305-755 (KR).

(74) Agents: **JANG, Seongku** et al.; 19th Fl., KEC Building, #275-7, Yangjae-dong, Seocho-ku, Seoul 137-130 (KR).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: INDENE DERIVATIVES AND PROCESS FOR THE PREPARATION THEREOF

(57) Abstract: The inventive indene derivatives of formula (I) are capable of selectively modulating the activities of peroxisome proliferator activated receptors (PPARs), causing no adverse side effects, and thus, they are useful for the treatment and prevention of disorders modulated by PPARs, i.e., metabolic syndromes such as diabetes, obesity, arteriosclerosis, hyperlipidemia, hyperinsulinism and hypertension, inflammatory diseases such as osteoporosis, liver cirrhosis and asthma, and cancer.

WO 2005/100297 A1